Source: TSG CN WG 1

Title: CRs to R97 and R99 (with mirror CRs) on Work Item GPRS towards 04.08 and

24.008

Agenda item: 7.3

Document for: APPROVAL

Introduction:

This document contains **5** CRs, **R97 with mirror CR to** Work Item **"GPRS"**, that have been agreed by **TSG CN WG1**, and are forwarded to TSG CN Plenary meeting #18 for approval.

Spec	CR#	Re v	CA T	Rel	Tdoc Title	Meeting	TDoc#	C_Version
04.08	A1125		F	R97	No MT calls after resumption of GPRS in Network Operation Mode I	N1-26	N1-022076	6.19.0
04.08	A1127		Α	R98	No MT calls after resumption of GPRS in Network Operation Mode I	N1-26	N1-022077	7.18.0
24.008	695	1	Α	R99	No MT calls after resumption of GPRS in Network Operation Mode I	N1-26	N1-022062	3.13.0
24.008	696	1	Α	Rel-4	No MT calls after resumption of GPRS in Network Operation Mode I	N1-26	N1-022063	4.8.0
24.008	697	1	А	Rel-5	No MT calls after resumption of GPRS in Network Operation Mode I	N1-26	N1-022064	5.5.0

Tdoc N1-022062Revision of N1-021948

	CHANGE REQUEST													
*		24	800.	CR	695		жrev	1	¥	Current v	ersio/	^{n:} 3.13	3.0 [#]	
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the % symbols. Proposed change affects: UICC apps% ME X Radio Access Network Core Network														
Title:														
	*			iis aite	i resump	Juon C	I GFR	III INC	twoi	к Орегано	טועו וווס	ue i		
Source:	ж	Nol	kıa											
Work item	code: ૠ	GP	RS							Date	<i>:</i> #	23/09/20	02	
Category:	**	Deta	F (corn A (corn B (add C (fun D (edi iled exp	rection) respond lition of ctional i torial mo	wing cate Is to a col feature), modification odification is of the TR 21.900	rrection on of for n) above	n in an e eature)			2	e of the (C (F (F (F (F 4 (F 5 (F	R99 e following GSM Phase Release 1: Release 1: Release 4: Release 4; Release 5; Release 6	se 2) 996) 997) 998) 999))	s:
Reason for	r change	e: #	perfo		AU inste					ory require the networ				PRS
Summary o	of chang	ge: ₩			MS requ me indic				perfo	orm a comb	bined	RAU in	NMO I if	no
Consequer not approv		Ж								ding that R S services		ith no Ll	J would	be
Clauses af	fected:	ж	4.7.5	.2										
Other spec	es	ж	Y N X X	Test s	core spe specifica Specifica	tions		¥	23.0	060 CR 40	7r2			
Other com	ments:	¥	The	related	23.060	CR ha	s been	<u>appr</u> o	ved a	already in	TSGS	SA #17		

How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3)	With "track changes" disabled, paste the entire CR form (the clause containing the first piece of changed text. Del the change request.	(use CTRL-A to select it) into the specification just in front of ete those parts of the specification which are not relevant to

4.7.1.7 Intersystem change between GSM and UMTS

For the UMTS to GSM and GSM to UMTS intersystem change the following cases can be distinguished:

- a) Intersystem change between cells belonging to different RA's

 The procedures executed by the MS depends on the network mode of operation in the old and new RA. If a change of the network operation mode has occurred in the new RA, then the MS shall behave as specified in clause 4.7.1.6. If no change of the network operation mode has occurred in the new RA, then the MS shall initiate the normal or combined RA update procedure depending on the network operation mode in the current RA.
- b) Intersystem change between cells belonging to the same RA:

If the READY timer is running in the MS in GSM or the MS is in PMM-CONNECTED mode in UMTS, then the MS shall perform a normal or combined RA update procedure depending on the network mode of operation in the current RA.

If the READY timer is not running in the MS in GSM or the MS is in PMM-IDLE mode in UMTS, then the MS shall not perform a RA update procedure (as long as the MS stays within the same RA) until up-link user data or signalling information needs to be sent from the MS to the network.

- If the MS is in the same access network, GSM or UMTS, as when it last sent user data or signalling messages, the procedures defined for that access system shall be followed. This shall be sending of an LLC PDU in a GSM cell or initiating the SERVICE REQUEST procedure in a UMTS cell.
- If the MS is in a different access network, GSM or UMTS, as when it last sent user data or signalling messages, the normal or combined RA update procedure shall be performed depending on the network operation mode in the current RA, before the sending of user data or signalling messages. If the signalling message is a DETACH REQUEST containing cause "power off", the RA update procedure need not to be performed.
- If the periodic routing area update timer expires the MS shall initiate the periodic RA update procedure.

If the READY timer is not running in the network in GSM or the network is in PMM-IDLE mode in UMTS, then the network shall page the MS if down-link user data or signalling information needs to be sent from the network to the MS. This shall include both GSM and UMTS cells.

- If the MS receives the paging indication in the same access network, GSM or UMTS, as when it last sent user data or signalling information, the MS shall send any LLC PDU in a GSM cell or shall initiate the SERVICE REQUEST procedure indicating service type "paging response" in a UMTS cell.
- If the MS receives the paging indication in a different access network, GSM or UMTS, as when it last sent user data or signalling information, the normal or combined RA update procedure shall be performed depending on the network operation mode in the current RA.
- c) Intersystem handover from GSM to UMTS during a CS connection:

After the successful completion of the handover from an GSM cell to an UMTS cell, an MS which has performed the GPRS suspension procedure in Gb mode (see 3GPP TS 04.18) (i.e. an MS in MS operation mode B or an DTM MS in a GSM cell that does not support DTM) shall perform a normal RA update procedure in the UMTS cell in order to resume the GPRS services in the network, before sending any other signalling messages or user data.

Within a combined routing area updating procedure the messages ROUTING AREA UPDATE ACCEPT and ROUTING AREA UPDATE COMPLETE carry information for the routing area updating and the location area updating.

4.7.5.2.1 Combined routing area updating procedure initiation

The combined routing area updating procedure is initiated only by a GPRS MS operating in MS operation modes A or B, if the MS is in state GMM-REGISTERED and MM-IDLE, and if the network operates in network operation mode I:

- when a GPRS MS that is IMSI attached for GPRS and non-GPRS services detects a change of the routing area in state GMM-REGISTERED and MM-IDLE;
- when a GPRS MS that is IMSI attached for GPRS services wants to perform an IMSI attach for non-GPRS services;
- after termination of a non-GPRS service via non-GPRS channels to update the association if the MS has changed the RA during that non-GPRS service transaction;
- after termination of non-GPRS service via non-GPRS channels to update the association if GPRS services were suspended during the non-GPRS service but no resume is received. See 3GPP TS 23.060 subclause 16.2.1.
- after a CM SERVICE REJECT message with cause value #4 is received by the mobile station (see clause 4.5.1.1); in this case the update type IE shall be set to "Combined RA/LA updating with IMSI attach";
- when a GPRS MS needs to update the network with the new MS Radio Access Capability IE; or
- in UMTS, to re-synchronize the PMM mode of MS and network after RRC connection release with cause "Directed signalling connection re-establishment", see Clause 4.7.2.5.

In GSM, the routing and location area identification are broadcast on the broadcast channel(s). A combined routing area updating procedure shall abort any ongoing GMM procedure. Aborted GMM procedures shall be repeated after the combined routing area updating procedure has been successfully performed. The ROUTING AREA UPDATE REQUEST message shall always be the first message sent from the MS in the new routing area after routing area change.

In UMTS, the routing and location area identification are broadcast on the broadcast channel(s) or sent to the MS via the PS signaling connection. A combined routing area updating procedure shall abort any ongoing GMM procedure. Aborted GMM procedures may be repeated after the combined routing area updating procedure has been successfully performed. The ROUTING AREA UPDATE REQUEST message shall always be the first GMM message sent from the MS in the new routing area after routing area change.

To initiate a combined routing area updating procedure the MS sends the message ROUTING AREA UPDATE REQUEST to the network, starts timer T3330 and changes to state GMM-ROUTING-UPDATING-INITIATED and MM LOCATION UPDATING PENDING. The value of the update type IE in the message shall indicate "combined RA/LA updating". If for the last attempt to update the registration of the location area a MM specific procedure was performed, the value of the update type IE in the ROUTING AREA UPDATE REQUEST message shall indicate "combined RA/LA updating with IMSI attach". Furthermore the MS shall include the TMSI status IE if no valid TMSI is available.

A GPRS MS in MS operation modes A or B that is in an ongoing circuit-switched transaction, shall initiate the combined routing area updating procedure after the circuit-switched transaction has been released, if the MS has changed the RA during the circuit-switched transaction and if the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall initiate the combined routing area updating procedure with IMSI attach after the circuit-switched transaction has been released if a GPRS attach was performed during the circuit-switched transaction and provided that the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall perform the normal routing area update procedure during an ongoing circuit-switched transaction.

In UMTS, when a ROUTING AREA UPDATE REQUEST is received by the SGSN over a new PS signalling connection while there is an ongoing PS signalling connection (network is already in mode PMM-CONNECTED) for this UE, the network shall progress the routing area update procedure as normal and release the previous PS signalling connection when the routing area update procedure has been accepted by the network .

NOTE: The re-establishment of the radio bearers of active PDP contexts is done as described in clause "Service Request procedure".

Tdoc N1-022063 Revision of N1-021949

	CHANGE REQUEST												
*		24.	800	CR	696		жrev	1	¥	Current v	ersion:	4.8.0	æ
For <u>H</u>	For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the % symbols.												
Proposed change affects: UICC apps# ME X Radio Access Network Core Network													
Title:	ж	No	MT ca	ılls afte	resumpt	tion o	f GPRS	in Ne	etwoi	k Operation	n Mode	e l	
Source:	ж	Nol	kia										
Work ite	m code:∺	GP	RS							Date	: ¥ 26	5/09/2002	
Category		A Use	F (corr A (corr B (add C (fund D (edid led exp	rection) respond dition of ctional re torial mo	wing cated is to a corresponding	rection on of fe) above	n in an ea			Release Use <u>one</u> 2	: # Ri GS (Re. (Re. (Re. (Re. (Re.	el-4 following re M Phase 2 lease 1996 lease 1998 lease 1998 lease 4) lease 5)	eleases: 2) 5) 7)
Reason f	or change	e: Ж	perfo		AU instea					tory require the netwo			
Summary	y of chang	ge:₩			MS requ ne indica				perfo	orm a com	bined R	AU in NM	10 I if no
Consequ not appre		ж								erstanding all CS serv		U with no	LU would
Clauses	affected:	ж	4.7.5	5.2									
Other sp		*	Y N X X	Test s	core spe pecificati Specifica	ions	tions	¥	23.	060			
Other co.	mments:	ж	The	related	23.060 C	CR ha	s been	appro	ved	already in	TSGS _A	#17	

How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3)) With "track changes" disabled, paste the entire CR form the clause containing the first piece of changed text. De the change request.	n (use CTRL-A to select it) into elete those parts of the specific	the specification just in front of ation which are not relevant to
	2 3 0.10 4 000.		

Within a combined routing area updating procedure the messages ROUTING AREA UPDATE ACCEPT and ROUTING AREA UPDATE COMPLETE carry information for the routing area updating and the location area updating.

4.7.5.2.1 Combined routing area updating procedure initiation

The combined routing area updating procedure is initiated only by a GPRS MS operating in MS operation modes A or B, if the MS is in state GMM-REGISTERED and MM-IDLE, and if the network operates in network operation mode I:

- when a GPRS MS that is IMSI attached for GPRS and non-GPRS services detects a change of the routing area in state GMM-REGISTERED and MM-IDLE;
- when a GPRS MS that is IMSI attached for GPRS services wants to perform an IMSI attach for non-GPRS services;
- after termination of a non-GPRS service via non-GPRS channels to update the association if the MS has changed the RA during that non-GPRS service transaction;
- after termination of non-GPRS service via non-GPRS channels to update the association if GPRS services were suspended during the non-GPRS service but no resume is received. See 3GPP TS 23.060 subclause 16.2.1.
- -__after a CM SERVICE REJECT message with cause value #4 is received by the mobile station (see subclause 4.5.1.1); in this case the update type IE shall be set to "Combined RA/LA updating with IMSI attach";
- -__when a GPRS MS needs to update the network with the new MS Radio Access Capability IE; or
- -__in UMTS, to re-synchronize the PMM mode of MS and network after RRC connection release with cause "Directed signalling connection re-establishment", see subclause 4.7.2.5.

In GSM, the routing and location area identification are broadcast on the broadcast channel(s). A combined routing area updating procedure shall abort any ongoing GMM procedure. Aborted GMM procedures shall be repeated after the combined routing area updating procedure has been successfully performed. The ROUTING AREA UPDATE REQUEST message shall always be the first message sent from the MS in the new routing area after routing area change.

In UMTS, the routing and location area identification are broadcast on the broadcast channel(s) or sent to the MS via the PS signaling connection. A combined routing area updating procedure shall abort any ongoing GMM procedure. Aborted GMM procedures may be repeated after the combined routing area updating procedure has been successfully performed. The ROUTING AREA UPDATE REQUEST message shall always be the first GMM message sent from the MS in the new routing area after routing area change.

To initiate a combined routing area updating procedure the MS sends the message ROUTING AREA UPDATE REQUEST to the network, starts timer T3330 and changes to state GMM-ROUTING-UPDATING-INITIATED and MM LOCATION UPDATING PENDING. The value of the update type IE in the message shall indicate "combined RA/LA updating". If for the last attempt to update the registration of the location area a MM specific procedure was performed, the value of the update type IE in the ROUTING AREA UPDATE REQUEST message shall indicate "combined RA/LA updating with IMSI attach". Furthermore the MS shall include the TMSI status IE if no valid TMSI is available.

A GPRS MS in MS operation modes A or B that is in an ongoing circuit-switched transaction, shall initiate the combined routing area updating procedure after the circuit-switched transaction has been released, if the MS has changed the RA during the circuit-switched transaction and if the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall initiate the combined routing area updating procedure with IMSI attach after the circuit-switched transaction has been released if a GPRS attach was performed during the circuit-switched transaction and provided that the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall perform the normal routing area update procedure during an ongoing circuit-switched transaction.

In UMTS, when a ROUTING AREA UPDATE REQUEST is received by the SGSN over a new PS signalling connection while there is an ongoing PS signalling connection (network is already in mode PMM-CONNECTED) for this UE, the network shall progress the routing area update procedure as normal and release the previous PS signalling connection when the routing area update procedure has been accepted by the network.

NOTE: The re-establishment of the radio bearers of active PDP contexts is done as described in subclause "Service Request procedure".

*Tdoc N1-022064*Revision of N1-021950

CHANGE REQUEST									
*	24.008	CR 697	≋ rev	1 #	Current vers	ion: 5.5.0	¥		
For <u>HELP</u> on u	ising this fo	orm, see bottom o	of this page or	look at t	he pop-up text	over the % sy	mbols.		
Proposed change affects: UICC apps# ME X Radio Access Network Core Network									
Title: 第	No MT o	alls after resump	tion of GPRS i	n Netwo	ork Operation M	lode I			
Source: #	Nokia								
 Work item code: ₩	GPRS				Date: ♯	26/09/2002			
Category: ₩	Use one of F (co. A (co. B (ac. C (fu. D (ec. Detailed e.	f the following cate, prection) presponds to a condition of feature), nctional modification intorial modification apparations of the an 3GPP TR 21.900.	rection in an ear on of feature)) above categories		2	Rel-5 the following religion (GSM Phase 2) (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5) (Release 6)			
Reason for change	per	rently 23.060 and form a RAU inste ume in NMO I.							
Summary of chang		ange the MS requ RS resume indica			form a combine	ed RAU in NMO	O I if no		
Consequences if not approved:		ssible and already icient leaves the				with no LU wo	ould be		
Clauses affected:	₩ 4.7	.5.2							
Other specs affected:		Other core specificat Coam Specificat	ions	₩ 23	.060				
Other comments:	署 The	related 23.060 C	CR has been a	pproved	already in TS0	GSA #17			

How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3)	With "track changes" disabled, paste the entire CR for the clause containing the first piece of changed text. the change request.	orm (use CTRL-A to select it) into the specification just in front of Delete those parts of the specification which are not relevant to

Within a combined routing area updating procedure the messages ROUTING AREA UPDATE ACCEPT and ROUTING AREA UPDATE COMPLETE carry information for the routing area updating and the location area updating.

4.7.5.2.1 Combined routing area updating procedure initiation

The combined routing area updating procedure is initiated only by a GPRS MS operating in MS operation modes A or B, if the MS is in state GMM-REGISTERED and MM-IDLE, and if the network operates in network operation mode I:

- when a GPRS MS that is IMSI attached for GPRS and non-GPRS services detects a change of the routing area in state GMM-REGISTERED and MM-IDLE;
- when a GPRS MS that is IMSI attached for GPRS services wants to perform an IMSI attach for non-GPRS services;
- after termination of a non-GPRS service via non-GPRS channels to update the association if the MS has changed the RA during that non-GPRS service transaction;
- after termination of non-GPRS service via non-GPRS channels to update the association if GPRS services were suspended during the non-GPRS service but no resume is received. See 3GPP TS 23.060 subclause 16.2.1.
- -__after a CM SERVICE REJECT message with cause value #4 is received by the mobile station (see subclause 4.5.1.1); in this case the update type IE shall be set to "Combined RA/LA updating with IMSI attach";
- -- when a GPRS MS needs to update the network with the new MS Radio Access Capability IE; or
- -__in UMTS, to re-synchronize the PMM mode of MS and network after RRC connection release with cause "Directed signalling connection re-establishment", see subclause 4.7.2.5.

In GSM, the routing and location area identification are broadcast on the broadcast channel(s). A combined routing area updating procedure shall abort any ongoing GMM procedure. Aborted GMM procedures shall be repeated after the combined routing area updating procedure has been successfully performed. The ROUTING AREA UPDATE REQUEST message shall always be the first message sent from the MS in the new routing area after routing area change.

In UMTS, the routing and location area identification are broadcast on the broadcast channel(s) or sent to the MS via the PS signaling connection. A combined routing area updating procedure shall abort any ongoing GMM procedure. Aborted GMM procedures may be repeated after the combined routing area updating procedure has been successfully performed. The ROUTING AREA UPDATE REQUEST message shall always be the first GMM message sent from the MS in the new routing area after routing area change.

To initiate a combined routing area updating procedure the MS sends the message ROUTING AREA UPDATE REQUEST to the network, starts timer T3330 and changes to state GMM-ROUTING-UPDATING-INITIATED and MM LOCATION UPDATING PENDING. The value of the update type IE in the message shall indicate "combined RA/LA updating". If for the last attempt to update the registration of the location area a MM specific procedure was performed, the value of the update type IE in the ROUTING AREA UPDATE REQUEST message shall indicate "combined RA/LA updating with IMSI attach". Furthermore the MS shall include the TMSI status IE if no valid TMSI is available.

A GPRS MS in MS operation modes A or B that is in an ongoing circuit-switched transaction, shall initiate the combined routing area updating procedure after the circuit-switched transaction has been released, if the MS has changed the RA during the circuit-switched transaction and if the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall initiate the combined routing area updating procedure with IMSI attach after the circuit-switched transaction has been released if a GPRS attach was performed during the circuit-switched transaction and provided that the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall perform the normal routing area update procedure during an ongoing circuit-switched transaction.

In UMTS, when a ROUTING AREA UPDATE REQUEST is received by the SGSN over a new PS signalling connection while there is an ongoing PS signalling connection (network is already in mode PMM-CONNECTED) for this UE, the network shall progress the routing area update procedure as normal and release the previous PS signalling connection when the routing area update procedure has been accepted by the network.

NOTE: The re-establishment of the radio bearers of active PDP contexts is done as described in subclause "Service Request procedure".

	CHANGE REQUEST										
*		0	<mark>4.08</mark>	CR	A1125	жre	ev	¥	Current vers	6.19.0) [#]
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the \$\mathbb{X}\$ symbols. Proposed change affects: UICC apps\$\mathbb{X} ME \mathbb{X} Radio Access Network \text{Core Network}											
Title:	ж	No	MT ca	alls afte	r resumpt	ion of GP	RS in N	etwor	k Operation N	Mode I	
Source:	×	No	kia								
Godi Go.	•	110	Ma								
Work iter	n code:♯	GF	RS						Date: ♯	26/09/2002	
Category Reason f		Deta be fo	F (corr A (corr B (add C (fun D (edi iiled exp ound in	rection) respond dition of ectional forial m planatio 3GPP	ds to a corniferature), modification odification) ons of the al IR 21.900.	ection in all of feature bove category	e) gories car	n	2 e) R96 R97 R98 R99 Rel-4 Rel-5 Rel-6	the following re (GSM Phase 2 (Release 1996) (Release 1997) (Release 1998) (Release 1999) (Release 4) (Release 5) (Release 6)	o perform
Summary	/ of chan	ge: #	in NI Chai	MO I.		irement to	always			perform GPRS	
Consequ not appro		ж							ding that RAU S services.	J with no LU w	ould be
01	- 66 4 1	00	475	- 0							
Clauses a Other spe		**	4.7.5 Y N X X	Othe	r core spec		s #	03.6	60		
Other co	mments:	¥	Х	O&M	Specificat	tions	n appro	ved al	ready in TSG	SA #17	

How to create CRs using this form:

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3)	 With "track changes" disabled, paste the entire CR form (use the clause containing the first piece of changed text. Delet the change request. 	se CTRL-A to select it) into the specification just in front of e those parts of the specification which are not relevant to

Within a combined routing area updating procedure the messages ROUTING AREA UPDATE ACCEPT and ROUTING AREA UPDATE COMPLETE carry information for the routing area updating and the location area updating.

4.7.5.2.1 Combined routing area updating procedure initiation

The combined routing area updating procedure is initiated only by a GPRS MS operating in MS operation modes A or B, if the MS is in state GMM-REGISTERED and if the network operates in network operation mode I:

- when a GPRS MS that is IMSI attached for GPRS and non-GPRS services detects a change of the routing area in state GMM-REGISTERED and MM-IDLE;
- when a GPRS MS that is IMSI attached for GPRS services wants to perform an IMSI attach for non-GPRS services;
- after termination of a non-GPRS service via non-GPRS channels to update the association if the MS has changed the LA during that non-GPRS service transaction;
- after termination of non-GPRS service via non-GPRS channels to update the association if GPRS services were suspended during the non-GPRS service but no resume is received. See TS GSM 03.60 subclause 16.2.1.
- -__after a CM SERVICE REJECT message with cause value #4 is received by the mobile station (see section 4.5.1.1), in which case the update type IE shall be set to "Combined RA/LA updating with IMSI attach"; or
- -__when a GPRS MS needs to update the network with the new MS Radio Access Capability IE.

The routing and location area identification are broadcast on the broadcast channel(s). A combined routing area updating procedure shall abort any ongoing GMM procedure. Aborted GMM procedures shall be repeated after the combined routing area updating procedure has been successfully performed. The ROUTING AREA UPDATE REQUEST message shall always be the first message sent from the MS in the new routing area after routing area change.

To initiate a combined routing area updating procedure the MS sends the message ROUTING AREA UPDATE REQUEST to the network, starts timer T3330 and changes to state GMM-ROUTING-UPDATING-INITIATED and MM LOCATION UPDATING PENDING. The value of the update type IE in the message shall indicate "combined RA/LA updating". If for the last attempt to update the registration of the location area a MM specific procedure was performed, the value of the update type IE in the ROUTING AREA UPDATE REQUEST message shall indicate "combined RA/LA updating with IMSI attach". Furthermore the MS shall include the TMSI status IE if no valid TMSI is available. A GPRS MS in MS operation modes A or B that is in an ongoing circuit-switched transaction, shall initiate the combined routing area updating procedure after the circuit-switched transaction has been released, if the MS has changed the RA during the circuit-switched transaction and if the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall initiate the combined routing area updating procedure with IMSI attach after the circuit-switched transaction has been released if a GPRS attach was performed during the circuit-switched transaction and provided that the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall perform the normal routing area update procedure during an ongoing circuit-switched transaction.

Within a combined routing area updating procedure the messages ROUTING AREA UPDATE ACCEPT and ROUTING AREA UPDATE COMPLETE carry information for the routing area updating and the location area updating.

4.7.5.2.1 Combined routing area updating procedure initiation

The combined routing area updating procedure is initiated only by a GPRS MS operating in MS operation modes A or B, if the MS is in state GMM-REGISTERED and MM-IDLE, and if the network operates in network operation mode I:

- when a GPRS MS that is IMSI attached for GPRS and non-GPRS services detects a change of the routing area in state GMM-REGISTERED and MM-IDLE;
- when a GPRS MS that is IMSI attached for GPRS services wants to perform an IMSI attach for non-GPRS services;
- after termination of a non-GPRS service via non-GPRS channels to update the association if the MS has changed the RA during that non-GPRS service transaction;
- after termination of non-GPRS service via non-GPRS channels to update the association if GPRS services were suspended during the non-GPRS service but no resume is received. See 3GPP TS 23.060 subclause 16.2.1.
- after a CM SERVICE REJECT message with cause value #4 is received by the mobile station (see clause 4.5.1.1); in this case the update type IE shall be set to "Combined RA/LA updating with IMSI attach";
- when a GPRS MS needs to update the network with the new MS Radio Access Capability IE; or
- in UMTS, to re-synchronize the PMM mode of MS and network after RRC connection release with cause "Directed signalling connection re-establishment", see Clause 4.7.2.5.

In GSM, the routing and location area identification are broadcast on the broadcast channel(s). A combined routing area updating procedure shall abort any ongoing GMM procedure. Aborted GMM procedures shall be repeated after the combined routing area updating procedure has been successfully performed. The ROUTING AREA UPDATE REQUEST message shall always be the first message sent from the MS in the new routing area after routing area change.

In UMTS, the routing and location area identification are broadcast on the broadcast channel(s) or sent to the MS via the PS signaling connection. A combined routing area updating procedure shall abort any ongoing GMM procedure. Aborted GMM procedures may be repeated after the combined routing area updating procedure has been successfully performed. The ROUTING AREA UPDATE REQUEST message shall always be the first GMM message sent from the MS in the new routing area after routing area change.

To initiate a combined routing area updating procedure the MS sends the message ROUTING AREA UPDATE REQUEST to the network, starts timer T3330 and changes to state GMM-ROUTING-UPDATING-INITIATED and MM LOCATION UPDATING PENDING. The value of the update type IE in the message shall indicate "combined RA/LA updating". If for the last attempt to update the registration of the location area a MM specific procedure was performed, the value of the update type IE in the ROUTING AREA UPDATE REQUEST message shall indicate "combined RA/LA updating with IMSI attach". Furthermore the MS shall include the TMSI status IE if no valid TMSI is available.

A GPRS MS in MS operation modes A or B that is in an ongoing circuit-switched transaction, shall initiate the combined routing area updating procedure after the circuit-switched transaction has been released, if the MS has changed the RA during the circuit-switched transaction and if the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall initiate the combined routing area updating procedure with IMSI attach after the circuit-switched transaction has been released if a GPRS attach was performed during the circuit-switched transaction and provided that the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall perform the normal routing area update procedure during an ongoing circuit-switched transaction.

In UMTS, when a ROUTING AREA UPDATE REQUEST is received by the SGSN over a new PS signalling connection while there is an ongoing PS signalling connection (network is already in mode PMM-CONNECTED) for this UE, the network shall progress the routing area update procedure as normal and release the previous PS signalling connection when the routing area update procedure has been accepted by the network .

NOTE: The re-establishment of the radio bearers of active PDP contexts is done as described in clause "Service Request procedure".

				(CHAI	NGE	REC	QUE	ST	•			CR-Form-v7
*		0	4.08	CR	A112	27	⊭ rev		æ	Current ver	sion:	7.18.	0 *
For <u>HELP</u> on using this form, see bottom of this page or look at the pop-up text over the % symbols.													
Proposed change affects: UICC apps# ME X Radio Access Network Core Network													
Title:	*	No	MT ca	ills afte	er resum	ption of	GPRS	in Ne	etwork	k Operation	Mode	e l	
Source:	ж	No	kia										
Work item	codo:#	GP	RS							Date: 3	£ 26	6/09/2002)
WOIK ILEIII	Code. m	Gr	NO							Date.	0 20	0/03/2002	_
Category:	ж	Α								Release:	€ R	98	
Use one of the following categories: F (correction) A (corresponds to a correction in an earlier release) B (addition of feature), C (functional modification) D (editorial modification) Detailed explanations of the above categories can be found in 3GPP TR 21.900. We one of the following release 199 (Release 1996) R96 (Release 1996) R97 (Release 1997) R99 (Release 1999) Rel-4 (Release 4) Rel-5 (Release 5)							2) 6) 7) 8)						
										Rel-6	(, , , ,	lease 6)	
Reason fo	r change	e: Ж	a RA							requiremer ork does not			
Summary	of chan	ge:#	Change the MS requirement to always perform a combined RAU in NMO I if no GPRS resume indication is received.										
Conseque	ences if	ж	Poss	sible ar	nd alread	dy exist	ng mis	under	rstanc	ding that RA	U witl	h no LU v	would be
not approv	ved:		suffic	cient le	eaves the	e UE un	pagea	ble for	r all C	S services.			
Clauses at	ffected:	*	4.7.5	. 2									
Other spec		*	Y N X X X	Othe Test	r core sp specifica Specific	ations	ions	ж	03.6	60			

How to create CRs using this form:

Comprehensive information and tips about how to create CRs can be found at http://www.3gpp.org/specs/CR.htm. Below is a brief summary:

Other comments: # The related 03.60 CR has been approved already in TSGSA #17

- 1) Fill out the above form. The symbols above marked # contain pop-up help information about the field that they are closest to.
- 2) Obtain the latest version for the release of the specification to which the change is proposed. Use the MS Word "revision marks" feature (also known as "track changes") when making the changes. All 3GPP specifications can be downloaded from the 3GPP server under ftp://ftp.3gpp.org/specs/ For the latest version, look for the directory name with the latest date e.g. 2001-03 contains the specifications resulting from the March 2001 TSG meetings.

3)	 With "track changes" disabled, paste the entire CR form (use the clause containing the first piece of changed text. Delet the change request. 	se CTRL-A to select it) into the specification just in front of e those parts of the specification which are not relevant to

Within a combined routing area updating procedure the messages ROUTING AREA UPDATE ACCEPT and ROUTING AREA UPDATE COMPLETE carry information for the routing area updating and the location area updating.

4.7.5.2.1 Combined routing area updating procedure initiation

The combined routing area updating procedure is initiated only by a GPRS MS operating in MS operation modes A or B, if the MS is in state GMM-REGISTERED and if the network operates in network operation mode I:

- when a GPRS MS that is IMSI attached for GPRS and non-GPRS services detects a change of the routing area in state GMM-REGISTERED and MM-IDLE;
- when a GPRS MS that is IMSI attached for GPRS services wants to perform an IMSI attach for non-GPRS services;
- after termination of a non-GPRS service via non-GPRS channels to update the association if the MS has changed the LA during that non-GPRS service transaction;
- after termination of non-GPRS service via non-GPRS channels to update the association if GPRS services were suspended during the non-GPRS service but no resume is received. See TS GSM 03.60 subclause 16.2.1.
- -__after a CM SERVICE REJECT message with cause value #4 is received by the mobile station (see clause 4.5.1.1), in which case the update type IE shall be set to "Combined RA/LA updating with IMSI attach"; or
- -__when a GPRS MS needs to update the network with the new MS Radio Access Capability IE.

The routing and location area identification are broadcast on the broadcast channel(s). A combined routing area updating procedure shall abort any ongoing GMM procedure. Aborted GMM procedures shall be repeated after the combined routing area updating procedure has been successfully performed. The ROUTING AREA UPDATE REQUEST message shall always be the first message sent from the MS in the new routing area after routing area change.

To initiate a combined routing area updating procedure the MS sends the message ROUTING AREA UPDATE REQUEST to the network, starts timer T3330 and changes to state GMM-ROUTING-UPDATING-INITIATED and MM LOCATION UPDATING PENDING. The value of the update type IE in the message shall indicate "combined RA/LA updating". If for the last attempt to update the registration of the location area a MM specific procedure was performed, the value of the update type IE in the ROUTING AREA UPDATE REQUEST message shall indicate "combined RA/LA updating with IMSI attach". Furthermore the MS shall include the TMSI status IE if no valid TMSI is available.

A GPRS MS in MS operation modes A or B that is in an ongoing circuit-switched transaction, shall initiate the combined routing area updating procedure after the circuit-switched transaction has been released, if the MS has changed the RA during the circuit-switched transaction and if the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall initiate the combined routing area updating procedure with IMSI attach after the circuit-switched transaction has been released if a GPRS attach was performed during the circuit-switched transaction and provided that the network operates in network operation mode I.

A GPRS MS in MS operation mode A shall perform the normal routing area update procedure during an ongoing circuit-switched transaction.